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A software package for computer-aided design analysis of thin-walled structures from composite materials

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Abstract

An algorithm of analyzing the design parameters for a thin-walled wing from composite material based on the efficient distribution of structural material between load-carrying elements is described. We consider the problems of convergence acceleration for the iteration design analysis. Also presented are the examples of determining the design parameters for a superlight aircraft wing and the rational parameters of the filler in the form of a three-dimensional rod structure. © 2011 Allerton Press, Inc.

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Keywords

Composite material, Design analysis automation, Software package, Thin-walled structure